July 5, 2005

Joan Fleck
RWQCB - North Coast Region
5550 Sky Lane Blvd., Suite A
Santa Rosa, CA 95403

Re: Re: Results of May, 2005 Monitoring Well Sampling
Redwood Oil Bulk Plant
455 Yolanda, Santa Rosa, CA 95402

Dear Ms. Fleck:

In May 2005, in response to a request from the North Coast Board, ECM sampled a number of monitoring wells located at the above referenced site (Figures 1 and 2, Appendix A). Results of the well sampling are tabulated in Tables A and B (Appendix B). Well locations are shown in Figure 2, Appendix A. Analytical laboratory results are contained in Appendix C.

It is now proposed to destroy the wells that were sampled during this event. Rationale for the proposed well destruction is outlined in the April 11, 2005 Well Abandonment Proposal.

Thank you for your attention to this site. Please call if you have questions or require additional information.

Sincerely,
ECM Group

Jim Green
Project Manager

cc: Peter Van Alyea, Redwood Oil Company

Attachments: Appendix A - Figures
Appendix B - Tables
Appendix C - Chain of Custody Documents and Analytical Laboratory Reports

APPENDIX A
FIGURES

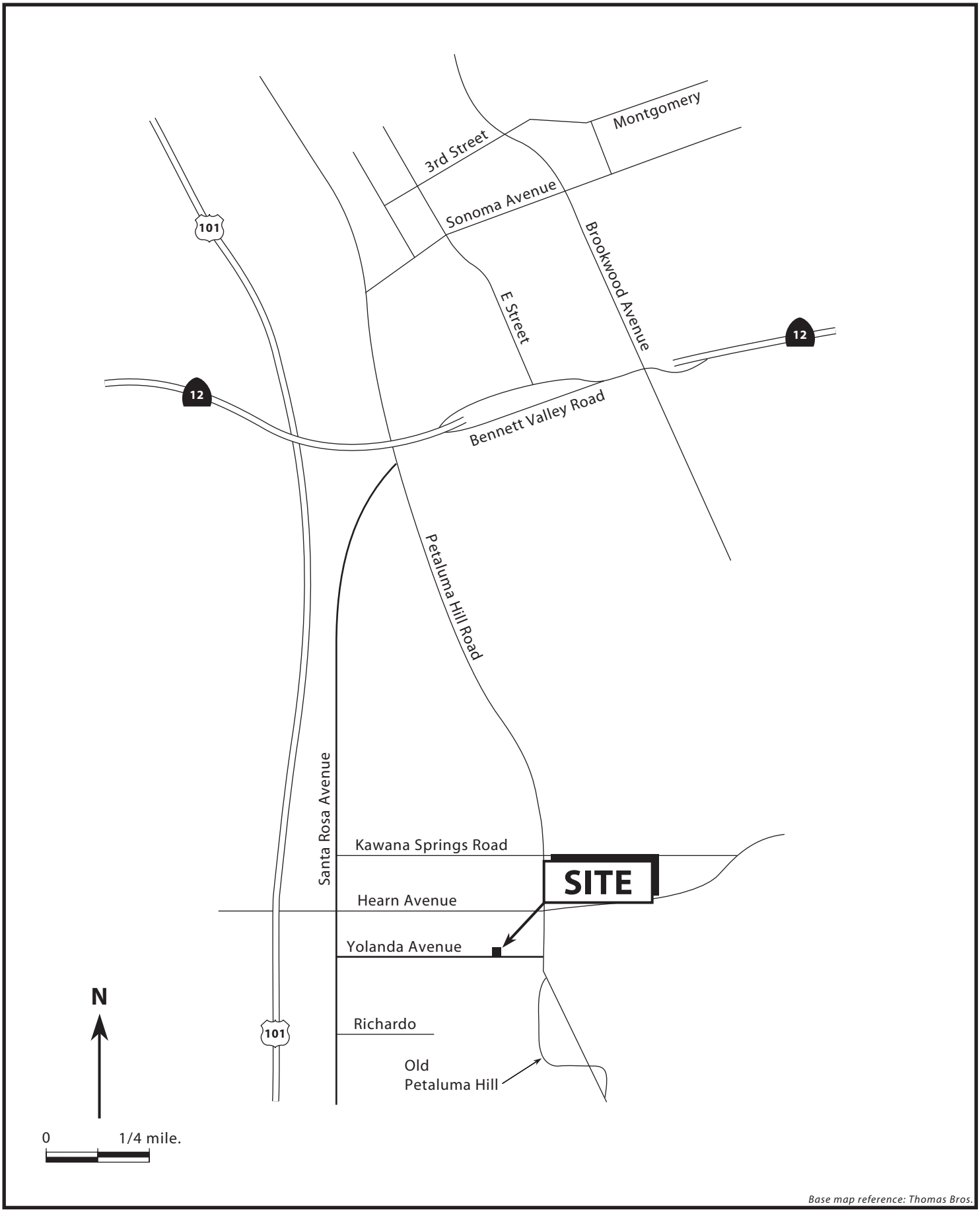

Figure 1. Site Location Map - Redwood Oil Service Station, 455 Yolanda Avenue, Santa Rosa, California

98-507 [Site Loc map] 3/19/02

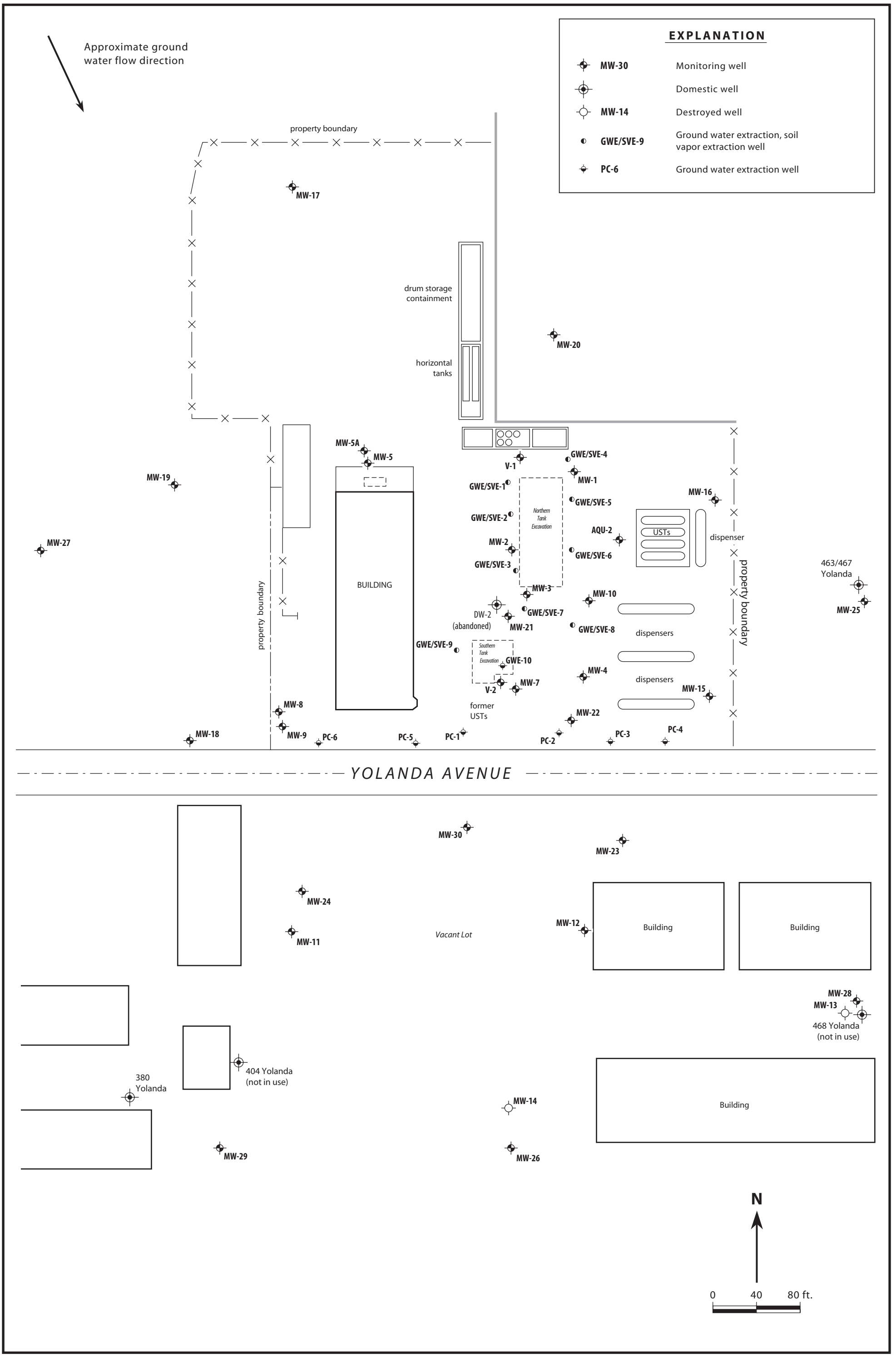

Figure 2. Well Locations - Redwood Oil Bulk Plant, 455 Yolanda Avenue, Santa Rosa, California

98-507- 35 [GW base with SVE wells] 5/17/05

APPENDIX B
TABLES

Table A: Analytic Results for Groundwater: Organic Compounds - May 2005 Sampling Event - Redwood Oil Bulk Plant, 455 Yolanda Avenue, Santa Rosa, California

Sample ID	Date Sampled	TPPH (G)	TPH (D)	TPH (MO)	Benzene	Toluene	Ethyl benzene	Xylenes	Notes*
		<---------- ppb ---------->							
MW-5	5/23/2005	<100	**87**	**290**	**1.8**	<0.5	<0.5	<1.5	
MW-5A	5/23/2005	**240**	**9,800**	**41,000***	**1.8**	<0.5	<0.5	<1.5	see Note 2
MW-11	5/23/2005	<100	<50	---	<0.5	<0.5	<0.5	**1.1**	
MW-12	5/23/2005	<100	<50	---	<0.5	<0.5	<0.5	**1.4**	
MW-15	5/23/2005	<100	<50	---	<0.5	<0.5	<0.5	**1.1**	
MW-16	5/23/2005	<100	<50	---	<0.5	<0.5	<0.5	**1.1**	
MW-17	6/7/2005	<50	<50	---	<0.5	<0.5	<0.5	**1.2**	
MW-18	5/23/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
MW-19	5/23/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
MW-20	5/23/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
MW-24d25	5/25/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
MW-24d73	5/25/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
MW-24d146	5/25/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
MW-24d178	5/25/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
MW-25d25	5/26/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
MW-25d75	5/26/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
MW-25d145	5/26/2005	<100	<50	---	<0.5	**2.9**	<0.5	<1.5	
MW-25d180	5/26/2005	**100**	<50	---	<0.5	**19**	**2.7**	**11.2**	

Table A: Analytic Results for Groundwater: Organic Compounds - May 2005 Sampling Event - Redwood Oil Bulk Plant, 455 Yolanda Avenue, Santa Rosa, California

Sample ID	Date Sampled	TPPH (G)	TPH (D)	TPH (MO)	Benzene	Toluene	Ethyl benzene	Xylenes	Notes*
		<---------- ppb ---------->							
MW-25d230	5/26/2005	**100**	<250*	---	<0.5	**15**	**3.7**	**15.1**	see Note 3
MW-27d25	5/26/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
MW-27d75	5/26/2005	<100	<50	---	<0.5	**0.7**	<0.5	<1.5	
MW-27d145	5/26/2005	<100	<250*	---	<0.5	**0.9**	**0.6**	**1.7**	see Note 3
MW-27d180	5/26/2005	<100	<50	---	<0.5	**3**	**2.3**	**5.1**	
MW-27d230	5/26/2005	<100	<50	---	<0.5	**5.2**	<0.5	<1.5	
MW-29d23	5/25/2005	<100	<50	---	<0.5	**4.9**	**0.7**	**2.5**	
MW-29d73	5/25/2005	<100	<50	---	<0.5	**0.8***	<0.5	<1.5	see Note 1
MW-29d145	5/25/2005	<100	<50	---	<0.5	**3.1**	**2.4**	**10.2**	
MW-29d180	5/25/2005	<100	<50	---	<0.5	<0.5	<0.5	<1.5	
V-1	5/23/2005	**3,300**	**1,000**	---	**150**	**1.3**	**15**	**8.1**	
AQU-2	5/23/2005	<100	<50	---	<0.5	**0.6**	**0.5**	**3.0**	

Notes:

1 The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
2 The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
3 The sample was diluted.

Table B: Analytic Results for Groundwater: Oxygenates - May 2005 Sampling Event - Redwood Oil Bulk Plant, 455 yolanda Avenue, Santa Rosa, California

Well ID	Sample Date	Tert-Butanol	MTBE	Diisopropyl Ether	Ethyl-tert-butyl-ether	Tert-Amylmethyl ether	Notes
		----------ppb----------					
MW-5	5/23/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-5A	5/23/2005	**390**	**28**	<0.5	<0.5	<0.5	
MW-11	5/23/2005	<5	**9.5**	<0.5	<0.5	<0.5	
MW-12	5/23/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-15	5/23/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-16	5/23/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-17	6/7/2005	<10	<1.0	<5.0	<5.0	<5.0	
MW-18	5/23/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-19	5/23/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-20	5/23/2005	**1.0**	<0.5	<0.5	<0.5	<0.5	
MW-24d25	5/25/2005	**13**	**43**	<0.5	<0.5	<0.5	
MW-24d73	5/25/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-24d146	5/25/2005	**17**	**1**	<0.5	<0.5	<0.5	
.							
MW-24d178	5/25/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-25d25	5/26/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-25d75	5/26/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-25d145	5/26/2005	**19**	<0.5	**0.6**	<0.5	<0.5	
MW-25d180	5/26/2005	**20**	<0.5	**1**	<0.5	<0.5	
MW-25d230	5/26/2005	**17**	<0.5	**0.9**	<0.5	<0.5	
MW-27d25	5/26/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-27d75	5/26/2005	**24**	<0.5	<0.5	<0.5	<0.5	
MW-27d145	5/26/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-27d180	5/26/2005	<5	<0.5	<0.5	<0.5	<0.5	
MW-27d230	5/26/2005	**30**	<0.5	**0.7**	<0.5	<0.5	

Table B: Analytic Results for Groundwater: Oxygenates - May 2005 Sampling Event - Redwood Oil Bulk Plant, 455 yolanda Avenue, Santa Rosa, California

Well ID	Sample Date	Tert-Butanol	MTBE	Diisopropyl Ether	Ethyl-tert-butyl-ether	Tert-Amylmethyl ether	Notes
		----------ppb----------					
MW-29d23	5/25/2005	**11**	<0.5	<0.5	<0.5	<0.5	
MW-29d73	5/25/2005	**8**	<0.5	<0.5	<0.5	<0.5	
MW-29d145	5/25/2005	**9**	<0.5	<0.5	<0.5	<0.5	
MW-29d180	5/25/2005	**8**	<0.5	<0.5	<0.5	<0.5	
V-1	5/23/2005	<5	**0.6**	<0.5	<0.5	<0.5	
AQU-2	5/23/2005	<5	**190**	<0.5	**0.5**	**3.6**	

Notes:
Samples were tested for ethanol and for lead scavengers 1,2-Dichloroethane (EDC) and 1,2-Dibromoethane (EDB).
Results for all samples were non-detect at ethanol detection limit of <1,000 ppb and lead scavengers detection limit of <0.5 ppb
Results for sample MW-17 were non-detect at ethanol detection limit of <100 ppb and lead scavengers detection limit of <0.5 ppb

APPENDIX C
CHAIN OF CUSTODY DOCUMENTS
ANALYTICAL LABORATORY REPORTS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

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Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

June 14, 2005

Jim Green, Project Manager
ECM Group
P.O. Box 802
Benicia, CA 94510

Dear Mr. Green:

Included are the results from the testing of material submitted on May 26, 2005 from the Yolanda, 98-507-14, F&BI 505270 project. There are 20 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Charlene Morrow

Charlene Morrow
Chemist

Enclosures
ECM0614R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 26, 2005 by Friedman & Bruya, Inc. from the ECM Group Yolanda, 98-507-14, F&BI 505270 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	ECM Group
505270-01	MW-11
505270-02	MW-12
505270-03	MW-15
505270-04	MW-16
505270-05	MW-18
505270-06	MW-19
505270-07	MW-20
505270-08	MW-5
505270-09	MW-5A
505270-10	V-1
505270-11	AQU-2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505270
Date Extracted: 05/27/05
Date Analyzed: 05/31/05 and 06/01/05

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Gasoline Range (C_6-C_{10})	Surrogate (% Recovery) (Limit 52-150)
MW-11 505270-01	<100	104
MW-12 505270-02	<100	105
MW-15 505270-03	<100	105
MW-16 505270-04	<100	104
MW-18 505270-05	<100	104
MW-19 505270-06	<100	105
MW-20 505270-07	<100	105
MW-5 505270-08	<100	104
MW-5A 505270-09	240	134
V-1 d 505270-10	3,300	113
AQU-2 505270-11	<100	105
Method Blank	<100	102

d - The sample was diluted.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505270
Date Extracted: 05/26/05
Date Analyzed: 06/01/05

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 68-143)
MW-11 505270-01	<50	104
MW-12 505270-02	<50	87
MW-15 505270-03	<50	76
MW-16 505270-04	<50	99
MW-18 505270-05	<50	76
MW-19 505270-06	<50	83
MW-20 505270-07	<50	85
MW-5 505270-08	87	122
MW-5A 505270-09	9,800	125
V-1 505270-10	1,000	87
AQU-2 505270-11	<50	83
Method Blank	<50	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505270
Date Extracted: 05/26/05
Date Analyzed: 06/01/05

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-5 505270-08	290	131
MW-5A d 505270-09	41,000	106
Method Blank	<250	68

d - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-11	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-01
Date Analyzed:	06/02/05	Data File:	060206.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	126	50	150
1,2-Dichloroethane-d4	139	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	109	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	9.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	1.1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-12	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-02
Date Analyzed:	06/02/05	Data File:	060207.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	129	50	150
1,2-Dichloroethane-d4	140	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	109	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	1.4
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-15	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-03
Date Analyzed:	06/02/05	Data File:	060209.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	132	50	150
1,2-Dichloroethane-d4	146	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	110	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	1.1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-16	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-04
Date Analyzed:	06/02/05	Data File:	060212.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	136	50	150
1,2-Dichloroethane-d4	145	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	107	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	1.1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-18	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-05
Date Analyzed:	06/02/05	Data File:	060213.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	139	50	150
1,2-Dichloroethane-d4	142	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	107	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-19	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-06
Date Analyzed:	06/02/05	Data File:	060214.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	141	50	150
1,2-Dichloroethane-d4	144	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	108	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-20	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-07
Date Analyzed:	06/02/05	Data File:	060215.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	144	50	150
1,2-Dichloroethane-d4	150	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	108	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	1.0
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-5	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-08
Date Analyzed:	06/02/05	Data File:	060216.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	143	50	150
1,2-Dichloroethane-d4	148	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	107	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	1.8
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-5A	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-09
Date Analyzed:	06/02/05	Data File:	060217.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	139	50	150
1,2-Dichloroethane-d4	146	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	119	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	390
Methyl t-butyl ether (MTBE)	28
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	1.8
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	V-1	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-10
Date Analyzed:	06/02/05	Data File:	060218.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	123	50	150
1,2-Dichloroethane-d4	145	50	150
Toluene-d8	110	50	150
4-Bromofluorobenzene	111	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	0.6
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	150
Toluene	1.3
Ethylbenzene	15
m,p-Xylene	7.5
o-Xylene	0.6
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	AQU-2	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	505270-11
Date Analyzed:	06/02/05	Data File:	060205.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	120	50	150
1,2-Dichloroethane-d4	148	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	112	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	190
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	0.5
t-Amyl methyl ether (TAME)	3.6
Benzene	<0.5
Toluene	0.6
Ethylbenzene	0.5
m,p-Xylene	2.2
o-Xylene	0.8
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	Method Blank	Client:	ECM Group
Date Received:	Not Applicable	Project:	Yolanda, 98-507-14, F&BI 505270
Date Extracted:	06/02/05	Lab ID:	05-709 mb
Date Analyzed:	06/02/05	Data File:	060211.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	140	50	150
1,2-Dichloroethane-d4	152 vo	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	109	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505270

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING EPA METHOD 8015M

Laboratory Code: 505270-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/L (ppb)	1,000	83	66-124

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505270

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	126	120	76-130	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505270

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Motor Oil	µg/L (ppb)	2,500	123	104	70-130	17

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505270

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B SIM

Laboratory Code: 505270-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Ethanol	µg/L (ppb)	<1,000	<1,000	nm
t-Butyl alcohol (TBA)	µg/L (ppb)	<5	<5	nm
Methyl t-butyl ether (MTBE)	µg/L (ppb)	<0.5	<0.5	nm
Diisopropyl ether (DIPE)	µg/L (ppb)	<0.5	<0.5	nm
Ethyl t-butyl ether (ETBE)	µg/L (ppb)	<0.5	<0.5	nm
t-Amyl methyl ether (TAME)	µg/L (ppb)	<0.5	<0.5	nm
Benzene	µg/L (ppb)	<0.5	<0.5	nm
Toluene	µg/L (ppb)	<0.5	<0.5	nm
1,2-Dichloroethane (EDC)	µg/L (ppb)	<0.5	<0.5	nm
1,2-Dibromoethane (EDB)	µg/L (ppb)	<0.5	<0.5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Ethanol	µg/L (ppb)	5,000	87	87	70-130	0
t-Butyl alcohol (TBA)	µg/L (ppb)	50	92	93	70-130	1
Methyl t-butyl ether (MTBE)	µg/L (ppb)	10	95	96	70-130	1
Diisopropyl ether (DIPE)	µg/L (ppb)	10	95	92	70-130	3
Ethyl t-butyl ether (ETBE)	µg/L (ppb)	10	92	90	70-130	2
t-Amyl methyl ether (TAME)	µg/L (ppb)	10	90	89	70-130	2
Benzene	µg/L (ppb)	10	93	91	70-130	2
Toluene	µg/L (ppb)	20	94	94	70-130	0
1,2-Dichloroethane (EDC)	µg/L (ppb)	10	118	121	70-130	3
1,2-Dibromoethane (EDB)	µg/L (ppb)	10	99	102	70-130	3

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

Note: The calibration verification result for m,p-Xylene exceeded 15% deviation. The average deviation for all compounds was less than or equal 15%, therefore the initial calibration is considered valid.

505270

SAMPLE CHAIN OF CUSTODY

CM 05/26/05

V4/B05

Page # 1 of 2

Send Report To Jim Griffin

Company ECM Group

Address PO Box 802

City, State, ZIP Benicia, CA 94510

Phone # (707) 751-0655 Fax # (707) 751-0653

SAMPLERS (signature)

PROJECT NAME/NO. Yolanda 98-505-14

PO #

REMARKS

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8260B	Fuel Oxygenates	Lead Scavengers	ETHANOL	METHANOL	Redox				Notes
MW-11	01 A-F	5/25/05	13:15	W	6	X	X	X	X	X	X	X					
MW-12	02 A-F		13:40	W	6	X	X	X	X	X	X	X					
MW 15	03 A-F		14:05	W	6	X	X	X	X	X	X	X					
MW 16	04 A-F		11:25	W	6	X	X	X	X	X	X	X					
MW-18	05 A-F		12:45	W	6	X	X	X	X	X	X	X					
MW-19	06 A-F		12:20	W	6	X	X	X	X	X	X	X					
MW 20	07 A-F		12:00	W	6	X	X	X	X	X	X	X					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael S. Jackson	ECM Group	5/25/05	
Received by:	Nhan Phan	Nhan Phan	Friedman & Bruya	5/26/05	09:00
Relinquished by:					
Received by:					

505270

SAMPLE CHAIN OF CUSTODY

CM 05/26/05 V4/B05

Page 2 of 2

Send Report To: JIM GREEN

Company: ECM Group

Address: PO Box 802

City, State, ZIP: Benicia, CA 94510

Phone #: (707) 751-0655 Fax #: (707) 751-0653

SAMPLERS (signature):

PROJECT NAME/NO.: YOLANDA 98-507-114

PO #:

REMARKS:

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8260B	Fuel Oxygenates	Lead Scavengers	5 PAH	[illegible]	METALS	[illegible]	[illegible]	[illegible]	Notes
MW-5	08 A-F	5/23/05	15:40	W	6	X	X	X	X	X	X	X	X				
MW-5A	09 A-F		15:55	W	6	X	X	X	X	X	X	X	X				
V-1	10 A-F		15:00	W	6	X	X	X	X	X	X	X					
ARU-2	11 A-F		12:50	W	6	X	X	X	X	X	X	X					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		MICHAEL S. JACKSON	ECM GROUP	5/25/05	
Received by:		Nhan Phan	Friedman & Bruya	5/26/05	09:00
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

June 14, 2005

Jim Green, Project Manager
ECM Group
P.O. Box 802
Benicia, CA 94510

Dear Mr. Green:

Included are the results from the testing of material submitted on May 27, 2005 from the Yolanda, 98-507-14, F&BI 505294 project. There are 18 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Charlene Morrow

Charlene Morrow
Chemist

Enclosures
ECM0614R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 27, 2005 by Friedman & Bruya, Inc. from the ECM Group Yolanda, 98-507-14, F&BI 505294 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	ECM Group
505294-01	MW-25d25
505294-02	MW-25d75
505294-03	MW-25d145
505294-04	MW-25d180
505294-05	MW-25d230
505294-06	MW-27d25
505294-07	MW-27d75
505294-08	MW-27d145
505294-09	MW-27d180
505294-10	MW-27d230

Also, surrogate recoveries were above established acceptance criteria for method 8260 analysis of several samples. No analytes associated with the surrogates were detected, therefore sample results are acceptable. All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/27/05
Project: Yolanda, 98-507-14, F&BI 505294
Date Extracted: 06/02/05
Date Analyzed: 06/03/05

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Gasoline Range (C_6-C_{10})	Surrogate (% Recovery) (Limit 52-150)
MW-25d25 505294-01	<100	98
MW-25d75 505294-02	<100	99
MW-25d145 505294-03	<100	102
MW-25d180 505294-04	100	100
MW-25d230 505294-05	100	101
MW-27d25 505294-06	<100	103
MW-27d75 505294-07	<100	102
MW-27d145 505294-08	<100	102
MW-27d180 505294-09	<100	100
MW-27d230 505294-10	<100	103
Method Blank	<100	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/27/05
Project: Yolanda, 98-507-14, F&BI 505294
Date Extracted: 05/31/05 and 06/08/05
Date Analyzed: 06/07/05, 06/08/05, and 06/11/05

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 68-143)
MW-25d25 505294-01	<50	107
MW-25d75 505294-02	<50	103
MW-25d145 505294-03	<50	92
MW-25d180 505294-04	<50	109
MW-25d230 d 505294-05	<250	96
MW-27d25 505294-06	<50	83
MW-27d75 505294-07	<50	105
MW-27d145 d 505294-08	<250	99
MW-27d180 505294-09	<50	102
MW-27d230 505294-10	<50	92
Method Blank	<50	88

d - The sample was diluted.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-25d25	Client:	ECM Group
Date Received:	05/27/05	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	505294-01
Date Analyzed:	06/07/05	Data File:	060712.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	134	50	150
1,2-Dichloroethane-d4	152 vo	50	150
Toluene-d8	122	50	150
4-Bromofluorobenzene	131	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1.0
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-25d75	Client:	ECM Group
Date Received:	05/27/05	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	505294-02
Date Analyzed:	06/07/05	Data File:	060713.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	137	50	150
1,2-Dichloroethane-d4	151 vo	50	150
Toluene-d8	123	50	150
4-Bromofluorobenzene	131	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1.0
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-25d145	Client:	ECM Group
Date Received:	05/27/05	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	505294-03
Date Analyzed:	06/07/05	Data File:	060714.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	137	50	150
1,2-Dichloroethane-d4	146	50	150
Toluene-d8	122	50	150
4-Bromofluorobenzene	131	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	19
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	0.6
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	2.9
Ethylbenzene	<0.5
m,p-Xylene	<1.0
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-25d180	Client:	ECM Group
Date Received:	05/27/05	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	505294-04
Date Analyzed:	06/07/05	Data File:	060715.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	139	50	150
1,2-Dichloroethane-d4	154 vo	50	150
Toluene-d8	124	50	150
4-Bromofluorobenzene	134	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	20
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	1.0
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	19
Ethylbenzene	2.7
m,p-Xylene	8.9
o-Xylene	2.3
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-25d230	Client:	ECM Group
Date Received:	05/27/05	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	505294-05
Date Analyzed:	06/07/05	Data File:	060716.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	139	50	150
1,2-Dichloroethane-d4	157vo	50	150
Toluene-d8	123	50	150
4-Bromofluorobenzene	135	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	17
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	0.9
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	15
Ethylbenzene	3.7
m,p-Xylene	12
o-Xylene	3.1
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-27d25	Client:	ECM Group
Date Received:	05/27/05	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	505294-06
Date Analyzed:	06/07/05	Data File:	060717.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	141	50	150
1,2-Dichloroethane-d4	158 vo	50	150
Toluene-d8	121	50	150
4-Bromofluorobenzene	134	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1.0
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-27d75	Client:	ECM Group
Date Received:	05/27/05	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	505294-07
Date Analyzed:	06/07/05	Data File:	060718.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	144	50	150
1,2-Dichloroethane-d4	159 vo	50	150
Toluene-d8	122	50	150
4-Bromofluorobenzene	131	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	24
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	0.7
Ethylbenzene	<0.5
m,p-Xylene	<1.0
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-27d145	Client:	ECM Group
Date Received:	05/27/05	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	505294-08
Date Analyzed:	06/07/05	Data File:	060719.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	148	50	150
1,2-Dichloroethane-d4	162 vo	50	150
Toluene-d8	121	50	150
4-Bromofluorobenzene	134	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	0.9
Ethylbenzene	0.6
m,p-Xylene	1.7
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-27d180	Client:	ECM Group
Date Received:	05/27/05	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	505294-09
Date Analyzed:	06/08/05	Data File:	060720.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	152 vo	50	150
1,2-Dichloroethane-d4	165 vo	50	150
Toluene-d8	122	50	150
4-Bromofluorobenzene	136	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	3.0
Ethylbenzene	2.3
m,p-Xylene	3.4
o-Xylene	1.7
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-27d230	Client:	ECM Group
Date Received:	05/27/05	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	505294-10
Date Analyzed:	06/08/05	Data File:	060721.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	154 vo	50	150
1,2-Dichloroethane-d4	164 vo	50	150
Toluene-d8	123	50	150
4-Bromofluorobenzene	133	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	30
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	0.7
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	5.2
Ethylbenzene	<0.5
m,p-Xylene	<1.0
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	Method Blank	Client:	ECM Group
Date Received:	Not Applicable	Project:	Yolanda, 98-507-14, F&BI 505294
Date Extracted:	06/07/05	Lab ID:	05-756 mb
Date Analyzed:	06/07/05	Data File:	060708.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	129	50	150
1,2-Dichloroethane-d4	132	50	150
Toluene-d8	123	50	150
4-Bromofluorobenzene	131	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1.0
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

Date of Report: 06/14/05
Date Received: 05/27/05
Project: Yolanda, 98-507-14, F&BI 505294

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING EPA METHOD 8015M

Laboratory Code: 505294-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Gasoline	µg/L (ppb)	1,000	99	102	66-124	3

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/27/05
Project: Yolanda, 98-507-14, F&BI 505294

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	90	103	68-144	13

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/27/05
Project: Yolanda, 98-507-14, F&BI 505294

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B SIM

Laboratory Code: 505294-10 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Ethanol	µg/L (ppb)	<1,000	<1,000	nm
t-Butyl alcohol (TBA)	µg/L (ppb)	<5	<5	nm
Methyl t-butyl ether (MTBE)	µg/L (ppb)	<1	<1	nm
Diisopropyl ether (DIPE)	µg/L (ppb)	<1	<1	nm
Ethyl t-butyl ether (ETBE)	µg/L (ppb)	<1	<1	nm
t-Amyl methyl ether (TAME)	µg/L (ppb)	<1	<1	nm
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
1,2-Dichloroethane (EDC)	µg/L (ppb)	<1	<1	nm
1,2-Dibromoethane (EDB)	µg/L (ppb)	<1	<1	nm

Laboratory Code: 505294-10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Ethanol	µg/L (ppb)	500	<1,000	90	50-150
t-Butyl alcohol (TBA)	µg/L (ppb)	50	<5	67	50-150
Methyl t-butyl ether (MTBE)	µg/L (ppb)	10	<1	97	50-150
Diisopropyl ether (DIPE)	µg/L (ppb)	10	<1	95	50-150
Ethyl t-butyl ether (ETBE)	µg/L (ppb)	10	<1	90	50-150
t-Amyl methyl ether (TAME)	µg/L (ppb)	10	<1	89	50-150
Benzene	µg/L (ppb)	10	<1	100	50-150
Toluene	µg/L (ppb)	10	<1	106	50-150
1,2-Dichloroethane (EDC)	µg/L (ppb)	10	<1	133	50-150
1,2-Dibromoethane (EDB)	µg/L (ppb)	10	<1	111	50-150

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/05
Date Received: 05/27/05
Project: Yolanda, 98-507-14, F&BI 505294

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Ethanol	µg/L (ppb)	500	94	70-130
t-Butyl alcohol (TBA)	µg/L (ppb)	50	105	70-130
Methyl t-butyl ether (MTBE)	µg/L (ppb)	10	108	70-130
Diisopropyl ether (DIPE)	µg/L (ppb)	10	110	70-130
Ethyl t-butyl ether (ETBE)	µg/L (ppb)	10	107	70-130
t-Amyl methyl ether (TAME)	µg/L (ppb)	10	104	70-130
Benzene	µg/L (ppb)	10	102	70-130
Toluene	µg/L (ppb)	10	106	70-130
1,2-Dichloroethane (EDC)	µg/L (ppb)	10	118	70-130
1,2-Dibromoethane (EDB)	µg/L (ppb)	10	117	70-130

505294

SAMPLE CHAIN OF CUSTODY

CM 05/27/05

B05/V4

Send Report To: Jim Green

Company: ECM Group

Address: PO Box 802

City, State, ZIP: Benicia, CA 94510

Phone #: (707) 751-0655 Fax #: (707) 751-0653

SAMPLERS (signature):

PROJECT NAME/NO: Tonnina 98-5097-14

PO #:

REMARKS:

Page # 1 of 1

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8260B	Fuel Oxygenates	Lead Scavengers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Notes
MW-25d 25	01 A-F	5/26/05	13:50	W	6	X	X	X	X	X	X	X					
MW-25d 75	02 A-F	↓	14:00	W	6	X	X	X	X	X	X	X					
MW-25d 145	03 A-F		14:15	W	6	X	X	X	X	X	X	X					
MW-25d 180	04 A-F		14:35	W	6	X	X	X	X	X	X	X					
MW-25d 230	05 A-F		14:50	W	6	X	X	X	X	X	X	X					
MW-27d 25	06 A-F		10:25	W	6	X	X	X	X	X	X	X					
MW-27d 75	07 A-F		10:45	W	6	X	X	X	X	X	X	X					
MW-27d 145	08 A-F		11:00	W	6	X	X	X	X	X	X	X					
MW-27d 180	09 A-F		11:15	W	6	X	X	X	X	X	X	X					
MW-27d 230	10 A-F	↓	11:50	W	6	X	X	X	X	X	X	X					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael S. Jackson	ECM Group	5/26/05	
Received by:		Nhan Phan	Friedman & Bruya	5/27/05	09:30
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

June 13, 2005

Jim Green, Project Manager
ECM Group
P.O. Box 802
Benicia, CA 94510

Dear Mr. Green:

Included are the results from the testing of material submitted on May 26, 2005 from the Yolanda, 98-507-14, F&BI 505271 project. There are 18 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Charlene Morrow

Charlene Morrow
Chemist

Enclosures
ECM0613R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 26, 2005 by Friedman & Bruya, Inc. from the ECM Group Yolanda, 98-507-14, F&BI 505271 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	ECM Group
505271-01	MW-24d25
505271-02	MW-24d73
505271-03	MW-24d146
505271-04	MW-24d178
505271-05	MW-29d23
505271-06	MW-29d73
505271-07	MW-29d145
505271-08	MW-29d180

The instrument calibration for toluene analysis of sample MW-29d73 was above acceptance criteria. The reported result may be biased slightly high. Insufficient sample was available for re-analysis. Also, a surrogate recovery was above established acceptance criteria for method 8260 analysis of samples MW-24d178, MW-29d73 and MW-29d180. No analytes associated with the surrogate were detected, therefore sample results are acceptable. All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505271
Date Extracted: 05/27/05
Date Analyzed: 05/31/05 and 06/01/05

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Gasoline Range (C_6-C_{10})	Surrogate (% Recovery) (Limit 52-150)
MW-24d25 505271-01	<100	105
MW-24d73 505271-02	<100	103
MW-24d146 505271-03	<100	103
MW-24d178 505271-04	<100	106
MW-29d23 505271-05	<100	102
MW-29d73 505271-06	<100	104
MW-29d145 505271-07	<100	102
MW-29d180 505271-08	<100	101
Method Blank	<100	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505271
Date Extracted: 05/26/05 and 06/01/05
Date Analyzed: 05/27/05, 05/31/05, and 06/02/05

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 68-143)
MW-24d25 505271-01	<50	68
MW-24d73 505271-02	<50	83
MW-24d146 505271-03	<50	96
MW-24d178 505271-04	<50	83
MW-29d23 505271-05	<50	99
MW-29d73 505271-06	<50	97
MW-29d145 505271-07	<50	73
MW-29d180 505271-08	<50	79
Method Blank	<50	74

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-24d25	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505271
Date Extracted:	06/02/05	Lab ID:	505271-01
Date Analyzed:	06/02/05	Data File:	060219.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	128	50	150
1,2-Dichloroethane-d4	142	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	108	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	13
Methyl t-butyl ether (MTBE)	43
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-24d73	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505271
Date Extracted:	06/02/05	Lab ID:	505271-02
Date Analyzed:	06/02/05	Data File:	060220.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	136	50	150
1,2-Dichloroethane-d4	147	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	107	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	1.0
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-24d146	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505271
Date Extracted:	06/02/05	Lab ID:	505271-03
Date Analyzed:	06/02/05	Data File:	060221.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	139	50	150
1,2-Dichloroethane-d4	147	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	17
Methyl t-butyl ether (MTBE)	1.0
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-24d178	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505271
Date Extracted:	06/02/05	Lab ID:	505271-04
Date Analyzed:	06/02/05	Data File:	060222.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	141	50	150
1,2-Dichloroethane-d4	151 vo	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-29d23	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505271
Date Extracted:	06/07/05	Lab ID:	505271-05
Date Analyzed:	06/07/05	Data File:	060709.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	128	50	150
1,2-Dichloroethane-d4	147	50	150
Toluene-d8	122	50	150
4-Bromofluorobenzene	131	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	11
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	4.9
Ethylbenzene	0.7
m,p-Xylene	1.9
o-Xylene	0.6
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-29d73	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505271
Date Extracted:	06/02/05	Lab ID:	505271-06
Date Analyzed:	06/03/05	Data File:	060228.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	148	50	150
1,2-Dichloroethane-d4	153 vo	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	8
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	0.8 ca
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-29d145	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505271
Date Extracted:	06/07/05	Lab ID:	505271-07
Date Analyzed:	06/07/05	Data File:	060710.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	132	50	150
1,2-Dichloroethane-d4	149	50	150
Toluene-d8	124	50	150
4-Bromofluorobenzene	134	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	9
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	3.1
Ethylbenzene	2.4
m,p-Xylene	8.1
o-Xylene	2.1
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	MW-29d180	Client:	ECM Group
Date Received:	05/26/05	Project:	Yolanda, 98-507-14, F&BI 505271
Date Extracted:	06/07/05	Lab ID:	505271-08
Date Analyzed:	06/07/05	Data File:	060711.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	133	50	150
1,2-Dichloroethane-d4	153 vo	50	150
Toluene-d8	123	50	150
4-Bromofluorobenzene	131	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	8
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	Method Blank	Client:	ECM Group
Date Received:	Not Applicable	Project:	Yolanda, 98-507-14, F&BI 505271
Date Extracted:	06/02/05	Lab ID:	05-709 mb
Date Analyzed:	06/02/05	Data File:	060211.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	140	50	150
1,2-Dichloroethane-d4	152 vo	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	109	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B SIM

Client Sample ID:	Method Blank	Client:	ECM Group
Date Received:	Not Applicable	Project:	Yolanda, 98-507-14, F&BI 505271
Date Extracted:	06/07/05	Lab ID:	05-756 mb
Date Analyzed:	06/07/05	Data File:	060708.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	129	50	150
1,2-Dichloroethane-d4	132	50	150
Toluene-d8	123	50	150
4-Bromofluorobenzene	131	50	150

Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000
t-Butyl alcohol (TBA)	<5
Methyl t-butyl ether (MTBE)	<0.5
Ethyl t-butyl ether (ETBE)	<0.5
Diisopropyl ether (DIPE)	<0.5
t-Amyl methyl ether (TAME)	<0.5
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
1,2-Dichloroethane (EDC)	<0.5
1,2-Dibromoethane (EDB)	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING EPA METHOD 8015M

Laboratory Code: 505270-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/L (ppb)	1,000	83	66-124

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	93	87	68-144	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B SIM

Laboratory Code: 505270-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Ethanol	µg/L (ppb)	<1,000	<1,000	nm
t-Butyl alcohol (TBA)	µg/L (ppb)	<5	<5	nm
Methyl t-butyl ether (MTBE)	µg/L (ppb)	<1	<1	nm
Diisopropyl ether (DIPE)	µg/L (ppb)	<1	<1	nm
Ethyl t-butyl ether (ETBE)	µg/L (ppb)	<1	<1	nm
t-Amyl methyl ether (TAME)	µg/L (ppb)	<1	<1	nm
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
1,2-Dichloroethane (EDC)	µg/L (ppb)	<1	<1	nm
1,2-Dibromoethane (EDB)	µg/L (ppb)	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Ethanol	µg/L (ppb)	5,000	87	87	70-130	0
t-Butyl alcohol (TBA)	µg/L (ppb)	50	92	93	70-130	1
Methyl t-butyl ether (MTBE)	µg/L (ppb)	10	95	96	70-130	1
Diisopropyl ether (DIPE)	µg/L (ppb)	10	95	92	70-130	3
Ethyl t-butyl ether (ETBE)	µg/L (ppb)	10	92	90	70-130	2
t-Amyl methyl ether (TAME)	µg/L (ppb)	10	90	89	70-130	2
Benzene	µg/L (ppb)	10	93	91	70-130	2
Toluene	µg/L (ppb)	20	94	94	70-130	0
1,2-Dichloroethane (EDC)	µg/L (ppb)	10	118	121	70-130	3
1,2-Dibromoethane (EDB)	µg/L (ppb)	10	99	102	70-130	3

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B SIM

Laboratory Code: 505294-10 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Ethanol	µg/L (ppb)	<1,000	<1,000	nm
t-Butyl alcohol (TBA)	µg/L (ppb)	<5	<5	nm
Methyl t-butyl ether (MTBE)	µg/L (ppb)	<1	<1	nm
Diisopropyl ether (DIPE)	µg/L (ppb)	<1	<1	nm
Ethyl t-butyl ether (ETBE)	µg/L (ppb)	<1	<1	nm
t-Amyl methyl ether (TAME)	µg/L (ppb)	<1	<1	nm
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
1,2-Dichloroethane (EDC)	µg/L (ppb)	<1	<1	nm
1,2-Dibromoethane (EDB)	µg/L (ppb)	<1	<1	nm

Laboratory Code: 505294-10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Ethanol	µg/L (ppb)	500	<1,000	90	50-150
t-Butyl alcohol (TBA)	µg/L (ppb)	50	<5	67	50-150
Methyl t-butyl ether (MTBE)	µg/L (ppb)	10	<1	97	50-150
Diisopropyl ether (DIPE)	µg/L (ppb)	10	<1	95	50-150
Ethyl t-butyl ether (ETBE)	µg/L (ppb)	10	<1	90	50-150
t-Amyl methyl ether (TAME)	µg/L (ppb)	10	<1	89	50-150
Benzene	µg/L (ppb)	10	<1	100	50-150
Toluene	µg/L (ppb)	10	<1	106	50-150
1,2-Dichloroethane (EDC)	µg/L (ppb)	10	<1	133	50-150
1,2-Dibromoethane (EDB)	µg/L (ppb)	10	<1	111	50-150

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05
Date Received: 05/26/05
Project: Yolanda, 98-507-14, F&BI 505271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Ethanol	µg/L (ppb)	500	94	70-130
t-Butyl alcohol (TBA)	µg/L (ppb)	50	105	70-130
Methyl t-butyl ether (MTBE)	µg/L (ppb)	10	108	70-130
Diisopropyl ether (DIPE)	µg/L (ppb)	10	110	70-130
Ethyl t-butyl ether (ETBE)	µg/L (ppb)	10	107	70-130
t-Amyl methyl ether (TAME)	µg/L (ppb)	10	104	70-130
Benzene	µg/L (ppb)	10	102	70-130
Toluene	µg/L (ppb)	10	106	70-130
1,2-Dichloroethane (EDC)	µg/L (ppb)	10	118	70-130
1,2-Dibromoethane (EDB)	µg/L (ppb)	10	117	70-130

505271

SAMPLE CHAIN OF CUSTODY

CM 05/26/05 V2/B05

Send Report To: JIM GREEN

Company: ECM Group

Address: PO Box 802

City, State, ZIP: Benicia, CA 94510

Phone #: (707) 751-0655 Fax #: (707) 751-0653

SAMPLERS (signature):

PROJECT NAME/NO.: YOKANDA 98-507-14

PO #:

REMARKS:

Page # 1 of 1

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8260B	Fuel Oxygenates	Lead Scavengers	ETHANOL	METHANOL	Reserved 5/26/05					Notes
MW-24d 25	01 A-E	5/25/05	11:30	W	6	X	X	X	X	X	X	X						
MW-24d 13	02 A-F		11:15	W	6	X	X	X	X	X	X	X						
MW-24d 116	03 A-F		12:15	W	6	X	X	X	X	X	X	X						
MW-24d 118'	04 A-F		12:35	W	6	X	X	X	X	X	X	X						
MW-29d 23	05 A-F		13:40	W	6	X	X	X	X	X	X	X						
MW-29d 13	06 A-F		13:55	W	6	X	X	X	X	X	X	X						
MW-29d 145	07 A-F		14:15	W	6	X	X	X	X	X	X	X						
MW-29d 180	08 A-F		14:40	W	6	X	X	X	X	X	X	X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		MICHAEL JACKSON	ECM GROUP	5/25/05	
Received by:		Nhan Phan	Friedman & Bruya	5/26/05	09:00
Relinquished by:					
Received by:					

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Jim Green
ECM Group
290 W. Channel Rd.
Benicia, CA 94510

Certificate ID: 43855 - 6/17/2005 9:16:12 PM

Order Number: 43855
Project Name: Yolanda
Project Number: 98-507-14

Date Received: 6/8/2005 4:37:39 PM

Certificate of Analysis - Final Report

On June 08, 2005, sample was received under chain of custody for analysis.
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Comments
Liquid	EPA 8260B - GC/MS	
	Methanol	
	TPH as Gasoline by GC/MS	
	TPH-Extractable w/SGCU	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Project ID: 98-507-14
Date Received: 6/8/2005

Certificate of Analysis - Data Report

Lab # : 43855-001 **Sample ID: MW-17** **Matrix:** Liquid **Sample Date:** 6/7/2005 10:35 AM

EPA 8015

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	Methanol QC Batch
Methanol	ND		1	0.50	mg/L	N/A	N/A	6/9/2005	WGC5050609

Surrogate	Surrogate Recovery	Control Limits (%)
1-Butanol	90.2	65 - 135

Analyzed by: mruan
Reviewed by: dba

EPA 3510C EPA 8015 MOD.(Extractable with Silica Gel Cleanup)

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	TPH-Extractable-SGCU QC Batch
TPH as Diesel	ND		1	50	µg/L	6/9/2005	DW050609S	6/10/2005	DW050609S

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.6	16 - 137

Analyzed by: JHsiang
Reviewed by: dba

EPA 5030B EPA 8260B EPA 624

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	8260Petroleum QC Batch
Benzene	ND		1	0.50	µg/L	N/A	N/A	6/14/2005	WMS2050614
Toluene	ND		1	0.50	µg/L	N/A	N/A	6/14/2005	WMS2050614
Ethyl Benzene	ND		1	0.50	µg/L	N/A	N/A	6/14/2005	WMS2050614
Xylenes, Total	1.2		1	0.50	µg/L	N/A	N/A	6/14/2005	WMS2050614
Methyl-t-butyl Ether	ND		1	1.0	µg/L	N/A	N/A	6/14/2005	WMS2050614
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	6/14/2005	WMS2050614
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	6/14/2005	WMS2050614
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	6/14/2005	WMS2050614
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	6/14/2005	WMS2050614
1,2-Dichloroethane	ND		1	0.50	µg/L	N/A	N/A	6/14/2005	WMS2050614
1,2-Dibromoethane (EDB)	ND		1	0.50	µg/L	N/A	N/A	6/14/2005	WMS2050614
Ethanol	ND		1	100	µg/L	N/A	N/A	6/14/2005	WMS2050614

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	112	75 - 125
Dibromofluoromethane	109	75 - 125
Toluene-d8	113	75 - 125

Analyzed by: TAF
Reviewed by: xbian

EPA 5030B GC-MS

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	TPH as Gasoline - GC-MS QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	6/14/2005	WMS2050614

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	104	75 - 125
Dibromofluoromethane	96.8	75 - 125
Toluene-d8	98.5	75 - 125

Analyzed by: TAF
Reviewed by: xbian

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - EPA 8015 - Methanol

Validated by: dba - 06/14/05

QC Batch ID: WGC5050609

QC Batch Analysis Date: 6/9/2005

Parameter	Result	DF	PQLR	Units
Methanol	ND	1	0.50	mg/L

Surrogate for Blank	% Recovery	Control Limits
1-Butanol	91.9	65 - 135

Laboratory Control Sample / Duplicate - Liquid - EPA 8015 - Methanol

Reviewed by: dba - 06/14/05

QC Batch ID: WGC5050609

QC Batch ID Analysis Date: 6/9/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Methanol	<0.50	50	46.8	mg/L	93.6	65 - 135

Surrogate	% Recovery	Control Limits
1-Butanol	92.6	65 - 135

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Methanol	<0.50	50	43.9	mg/L	87.8	6.4	25.0	65 - 135

Surrogate	% Recovery	Control Limits
1-Butanol	87.1	65 - 135

Matrix Spike / Matrix Spike Duplicate - Liquid - EPA 8015 - Methanol

Reviewed by: dba - 06/14/05

QC Batch ID: WGC5050609

QC Batch ID Analysis Date: 6/9/2005

MS

Sample Spiked: 43855-001

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	Recovery Limits
Methanol	ND	50	44.5	mg/L	6/9/2005	89.0	65 - 140

Surrogate	% Recovery	Control Limits
1-Butanol	90.2	65 - 135

MSD

Sample Spiked: 43855-001

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Methanol	ND	50	43.6	mg/L	6/9/2005	87.2	2.0	25.0	65 - 140

Surrogate	% Recovery	Control Limits
1-Butanol	93.1	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - EPA 8015 MOD.(Extractable with Silica Gel Cleanup) - TPH-Extractable-SGCU

Validated by: dba - 06/13/05

QC/Prep Batch ID: DW050609S

QC/Prep Date: 6/9/2005

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	77.3	16 - 137

Laboratory Control Sample / Duplicate - Liquid - EPA 8015 MOD.(Extractable with Silica Gel Cleanup) - TPH-Extractable-SGCU

Reviewed by: dba - 06/13/05

QC/Prep Batch ID: DW050609S

QC/Prep Date: 6/9/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<50	1000	860	µg/L	86.0	35 - 109
TPH as Motor Oil	<250	1000	647	µg/L	64.7	30 - 132

Surrogate	% Recovery	Control Limits
o-Terphenyl	81	16 - 137

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<50	1000	927	µg/L	92.7	**7.5**	25.0	35 - 109
TPH as Motor Oil	<250	1000	759	µg/L	75.9	**16**	25.0	30 - 132

Surrogate	% Recovery	Control Limits
o-Terphenyl	79	16 - 137

Entech Analytical Labs, Inc.

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Method Blank - Liquid - EPA 8260B - 8260Petroleum

Validated by: xbian - 06/17/05

QC Batch ID: WMS2050614

QC Batch Analysis Date: 6/14/2005

Parameter	Result	DF	PQLR	Units
1,2-Dibromoethane (EDB)	ND	1	0.50	µg/L
1,2-Dichloroethane	ND	1	0.50	µg/L
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethanol	ND	1	100	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	108	75 - 125
Dibromofluoromethane	101	75 - 125
Toluene-d8	111	75 - 125

Method Blank - Liquid - GC-MS - TPH as Gasoline - GC-MS

Validated by: xbian - 06/17/05

QC Batch ID: WMS2050614

QC Batch Analysis Date: 6/14/2005

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	100	75 - 125
Dibromofluoromethane	89.6	75 - 125
Toluene-d8	96.6	75 - 125

Entech Analytical Labs, Inc.

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Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

Reviewed by: xbian - 06/17/05

QC Batch ID: WMS2050614

QC Batch ID Analysis Date: 6/14/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	18.6	µg/L	93.0	80 - 120
Benzene	<0.50	20	20.8	µg/L	104	80 - 120
Chlorobenzene	<0.50	20	21.3	µg/L	107	80 - 120
Methyl-t-butyl Ether	<1.0	20	22.3	µg/L	112	80 - 120
Toluene	<0.50	20	21.1	µg/L	106	80 - 120
Trichloroethene	<0.50	20	21.7	µg/L	109	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**113**	75 - 125
Dibromofluoromethane	**107**	75 - 125
Toluene-d8	**111**	75 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	16.7	µg/L	83.4	**11**	25.0	80 - 120
Benzene	<0.50	20	18.7	µg/L	93.4	**11**	25.0	80 - 120
Chlorobenzene	<0.50	20	19.6	µg/L	98.1	**8.3**	25.0	80 - 120
Methyl-t-butyl Ether	<1.0	20	20.9	µg/L	105	**6.7**	25.0	80 - 120
Toluene	<0.50	20	19.4	µg/L	97.1	**8.5**	25.0	80 - 120
Trichloroethene	<0.50	20	19.7	µg/L	98.7	**9.5**	25.0	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**109**	75 - 125
Dibromofluoromethane	**105**	75 - 125
Toluene-d8	**109**	75 - 125

Laboratory Control Sample / Duplicate - Liquid - GC-MS - TPH as Gasoline - GC-MS

Reviewed by: xbian - 06/17/05

QC Batch ID: WMS2050614

QC Batch ID Analysis Date: 6/14/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	250	245	µg/L	98.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**102**	75 - 125
Dibromofluoromethane	**91.4**	75 - 125
Toluene-d8	**96.8**	75 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250	224	µg/L	89.5	**9.1**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**99.3**	75 - 125
Dibromofluoromethane	**90.5**	75 - 125
Toluene-d8	**95.1**	75 - 125

Entech Analytical Labs, Inc.

3334 Victor Court (408) 588-0200
Santa Clara, CA 95054 (408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: JIM GREEN	Phone No.: 707-751-0655	Purchase Order No.:	Invoice to: (If Different)	Phone:
Company Name: ECM GROUP	Fax No.: 707-751-0653	Project No.: 98-507-14	Company: REDWOOD OIL CO.	Quote No.:
Mailing Address: P.O. BOX 802	Email Address:	Project Name: YOLANDA	Billing Address: (If Different)	
City: BENICIA	State: CA / Zip Code: 94510	Project Location:	City:	State: / Zip:

Sampler: MIKE JACKSON
Field Org. Code:
Global ID:

Turn Around Time
- ❑ Same Day
- ❑ 1 Day
- ❑ 2 Day
- ❑ 3 Day
- ❑ 4 Day
- ☒ 10 Day

Order ID: 43855

Client ID / Field Point	Lab. No.	Sample Date	Sample Time	Matrix	No. of Containers	EPA 8260B	BTEX ☒ MTBE ❑ TPH Gas ☒ by 8260B	5 Oxygenates (MTBE, TBA, ETBA, DIPE, TAME) ☒ Lead Scavengers (1,2-DCA & EDB) ☒ Ethanol ☒	Base/Neutral/Acid Organics 8270C ❑ PAH - 8270C ❑ PAH - 8270C SIM ❑	TPH Extractable: Diesel ☒ Motor Oil ❑ Other ❑ w/ Si-Gel Cleanup ☒	Pesticides-8081 ❑ PCBs - 8082 ❑	TPH as Gas/BTEX ❑ MTBE ❑ by 8015M/8020	Methanol by 8015M	Anions: F ❑ Cl ❑ Br ❑ SO4 ❑ NO3 ❑ NO2 ❑ PO4 ❑	pH ❑ TSS ❑ SC ❑ TOC ❑ TRPH ❑ O & G ❑	Metals - Circle Below: Total ❑ Dissolved ❑ STLC ❑ TCLP ❑	Remarks
MW-17	-001	6/7/05	10:35	W	6		X	X			X			X			

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	6/8/05	1237
Relinquished by:	Received by:	Date:	Time:
Relinquished by:	Received by:	Date:	Time:

Special Instructions or Comments

- ❑ EDD Report
- ❑ EDF Report
- ❑ Plating
- ❑ LUFT-5
- ❑ RCRA-8
- ❑ PPM-13
- ❑ CAM-17

Metals:
Al, As, Sb, Ba, Be, Bi, B, Cd, Ce, Ca, Cr, Co, Cs, Cu, Fe, Pb, Mg, Mn,
Ga, Ge, Hg, In, Li, Mo, Ni, P, K, Si, Ag, Na, S, Se, Sr, Ta, Te, Tl, Sn, Ti, Zn, V, W, Zr